Equipment Manual

Monarch® 9416® Printer

McDonald's®

AVERY DENNISON

Each product and program carries a respective written warranty, the only warranty on which the customer can rely. Paxar reserves the right to make changes in the product, the programs, and their availability at any time and without notice. Although Paxar has made every effort to provide complete and accurate information in this manual, Paxar shall not be liable for any omissions or inaccuracies. Any update will be incorporated in a later edition of this manual.

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WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CANADIAN D.O.C. WARNING

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.
Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Réglement sur le brouillage radioélectrique édicte par le ministère des Communications du Canada.

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GETTING STARTED

<div style="float:right">**1**</div>

Use this system for product freshness.
The system consists of a Monarch® 9416® printer
and a keypad with the McDonald's® Freshness
application.

Using This Manual

Following is a summary of the contents of this manual.

	Chapter	Contents
1	Getting Started	Unpacking and installing the printer and loading supplies.
2	Using the Keypad	Configuring the system, setting the date and time, and processing products.
3	Care & Maintenance	Clearing label jams and cleaning the printer.
4	Troubleshooting	Common problems and their solutions.
5	Using the Update Utility	Editing the keypad overlay and updating the keypad settings.
A	Specifications	Printer specifications.

Audience

This *Equipment Manual* is for the person who prints and applies labels.

This chapter includes information about

♦ unpacking the freshness system

♦ connecting the printer's power supply

♦ reading the printer's indicator light

♦ loading labels.

Information in this document supercedes information in previous versions. Check our Web site (**www.paxar.com**) for the latest documentation and release information.

Unpacking the Freshness System

After you unpack the system, you should have the following:

♦ 9416 printer and power supply

♦ power strip

♦ communications cable

♦ keypad and AC adapter (depends on kit ordered).

For missing items, service, technical assistance or ordering labels, please call the number on the back of this manual.

Keep all packaging material in case you need to move or return the system.

Connecting the Printer's Power Supply

Do not touch the electrical connectors while setting up the printer. Electrostatic discharge can damage or destroy the printhead or electronic components.

To connect the power supply to the printer:

1. Place the printer on a table in a location that allows easy access to the front of the printer.

Note: Never operate the printer resting on its side or upside down.

2. Turn off the printer. Press the power switch on the back of the printer to the off (O) position.

3. Place the power supply in a suitable location, preferably on a table, near an electrical outlet.

4. Plug the three-hole end of the AC adapter cable into the three-pronged outlet in the printer's power supply.

Caution: The printer's power supply uses a different voltage than the keypad. To connect the wrong power supply could permanently damage the keypad or the printer.

Straight Plug is the power supply for the printer

L-shaped Plug is the power supply for the keypad
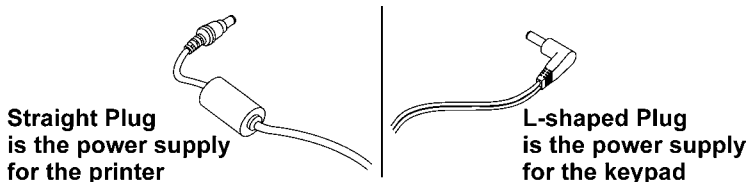
5. Plug the round end of the power supply cable into the socket at the back of the printer.
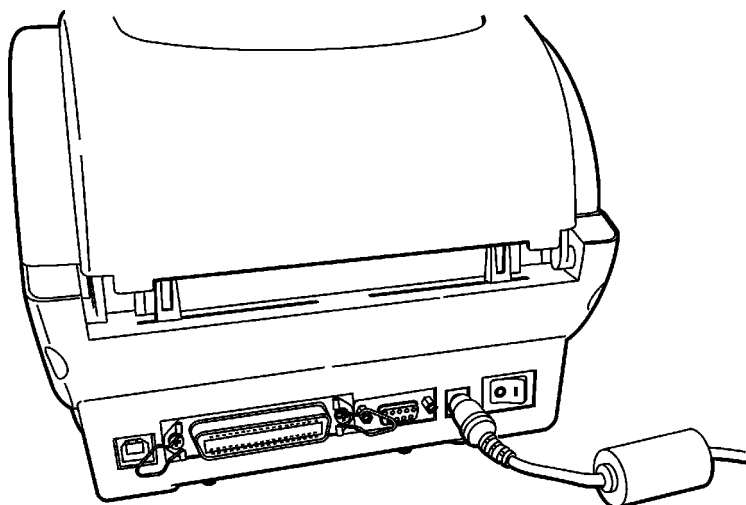
6. Plug the three-pronged end of the AC adapter cord into a grounded electrical outlet.

Warning: The printer and power supply should never be operated in a location where either one can get wet. Personal injury could result.

Reading the Indicator Light

The indicator light monitors the printer's status.
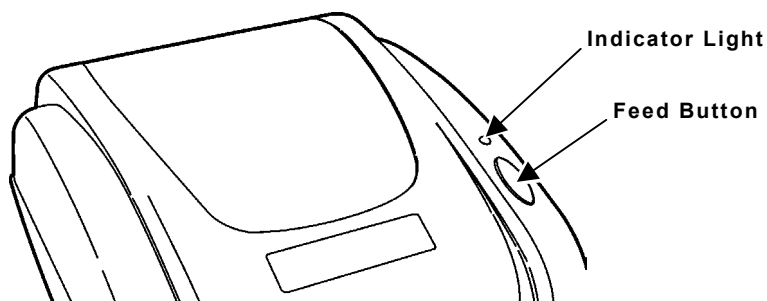
Indicator Light	Description
GREEN	Printer is on and ready to use.
FLASHING GREEN	Printer is paused. Press the **FEED** button to resume printing.
FLASHING RED	Printer error condition. See Chapter 4, "Troubleshooting" for error conditions and solutions.
ORANGE	The printer is detecting the labels.
No light	Printer is off. Make sure the power supply is connected properly. See "Connecting the Power Supply" earlier in this chapter.

Loading Labels

If you run out of labels while printing, do not turn off the printer when reloading the labels. You may lose your data. The printer resumes printing when reloaded.

1. Remove and discard the tape from a new roll of labels.

2. Press the cover release levers located on both sides of the printer towards the front of the printer to release the cover.
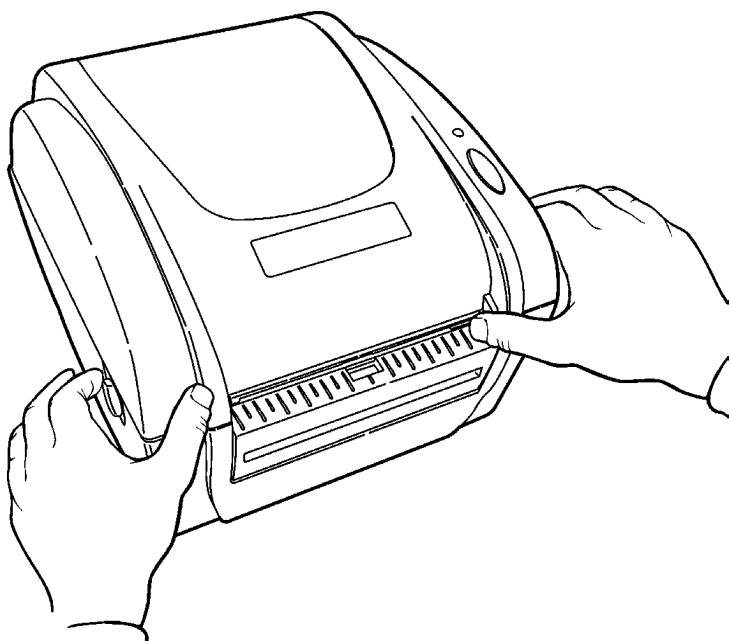
3. Lift open the cover.

4. Remove a supply holder guide from one end of the supply holder. The supply holder is normally attached with a line to the inside of the printer.
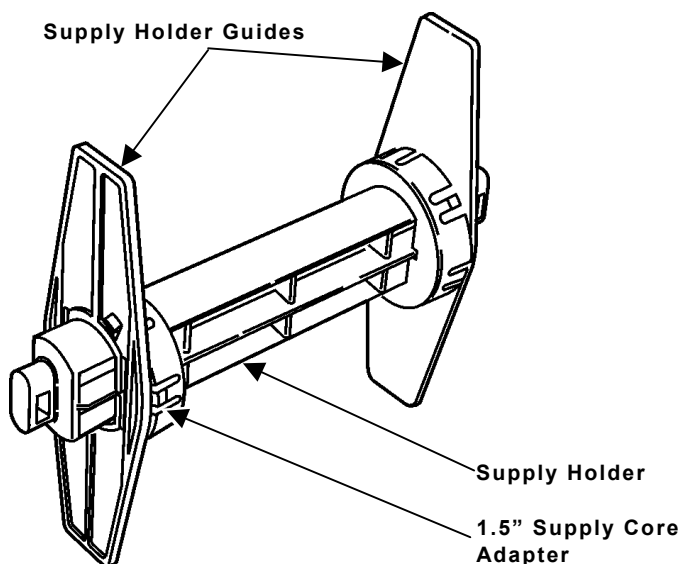
5. Slide a roll of labels onto the supply holder. If the core diameter on your roll of labels is 1-inch in diameter, remove the 1.5-inch supply core adapters from the supply holder guides.

6. Slide the supply holder guide back onto the end of the supply holder.

7. Insert the ends of the supply holder into the slots in the supply roll mount.

Supply Roll Mount
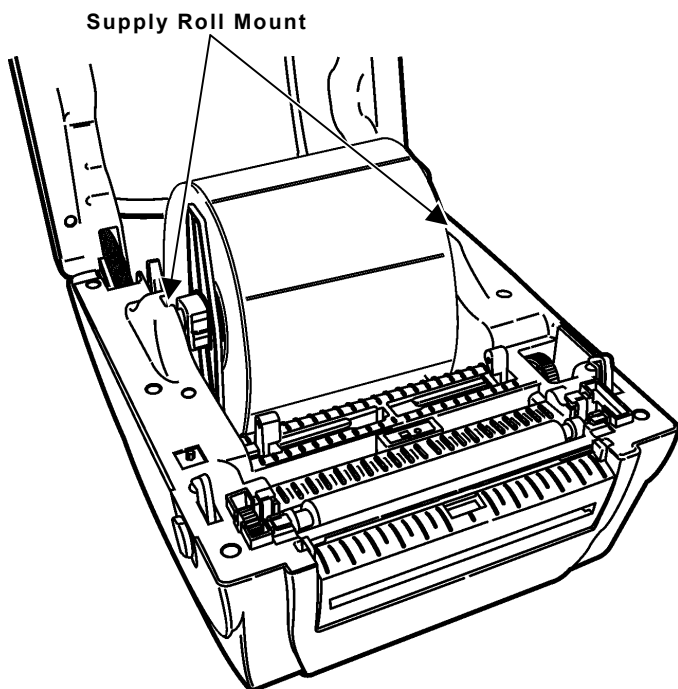
Note: The plastic line attaching the supply holder to the printer should be tucked down out of the way of the supply holder and supply holder guides. Otherwise, the plastic line may wrap around the supply holder or get caught on the supply holder guides.

8. Turn the dial to adjust the supply guides to their widest position.
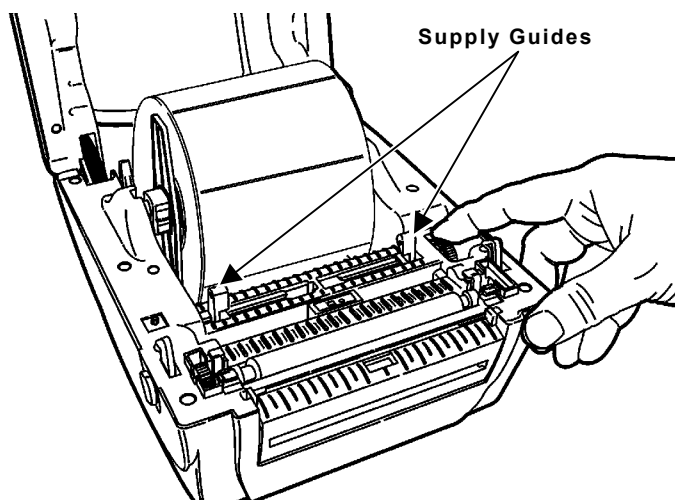
Supply Guides

9. Feed the labels, printing side up, under the supply guides and over the platen roller.

Supply Guides

Platen Roller
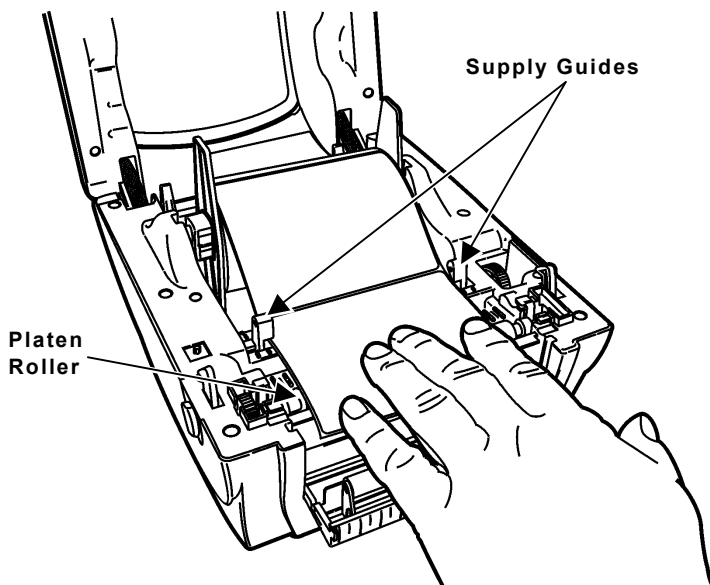
10. Press the labels under the supply guides.

11. Turn the dial to adjust the supply guides so that they barely touch the edges of the label backing paper.

12. Close the cover until it locks in place.

13. Press the **FEED** button. The indicator light should be GREEN.
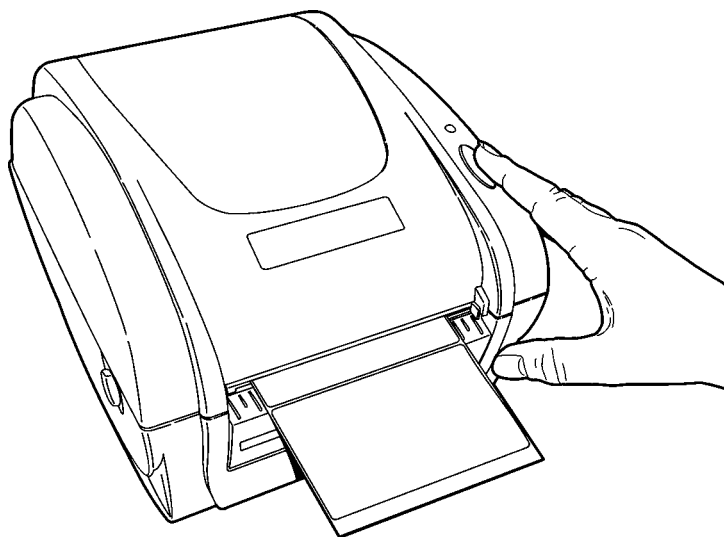
14. Calibrate the supply if printing stops and the indicator light turns RED or the labels do not properly advance. See "Calibrating the Supply," for more information.

Calibrating the Supply

1. Turn off the printer.

2. Press and hold the **FEED** button while turning on the printer.

3. Release the **FEED** button after the indicator light starts flashing ORANGE. The printer calibrates the die cut sensor, measures the label length, and prints the test labels.

4. To resume normal printing, turn off the printer, wait two seconds, then turn it back on again.

   If the supply does not calibrate, make sure the die cut sensor has not been accidentally moved.

Checking the Die Cut Sensor

After loading supplies, make sure you did not accidentally move the die cut sensor. The die cut sensor senses and calibrates the supply. For your supplies, make sure the die cut sensor is in the detented position and the middle of the square lens lines up with the arrow inside the printer.

Sensor set for die cut supplies
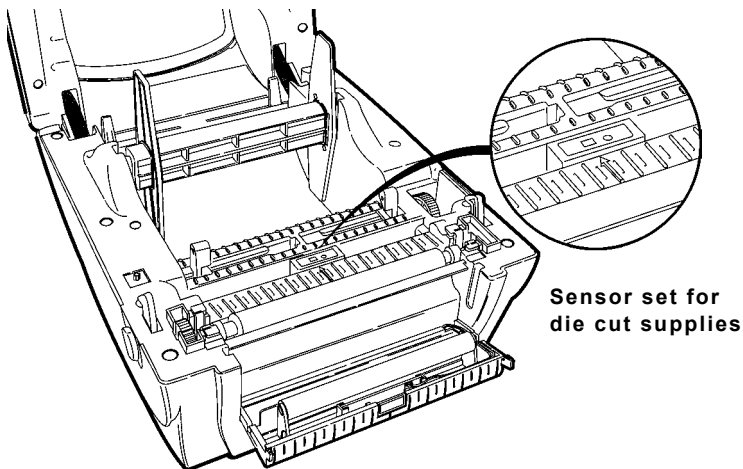
USING THE KEYPAD 2

This chapter describes how to

♦ connect the keypad

♦ use the keypad

♦ configure the McDonald's system–**IMPORTANT!**

♦ set the date and time

♦ process the product

♦ print a Use First label

♦ use the Stop Printing function.

Note: Keep this manual in a safe place; otherwise, changing the settings requires a service call.

Connecting the Keypad's Power Supply

The keypad should not be operated in a location that has room temperatures above 158°F or below –4°F for extended periods of time. This could permanently damage the display.
To connect the power supply to the keypad:

1. Place the keypad on a table or shelf.

2. Place the keypad's power supply in a suitable location, preferably on a table near an electrical outlet.

3. Plug the three-hole end of the AC adapter cable into the three-pronged outlet in the keypad's power supply.

4. Plug the power supply cable with the L-shaped end into the socket on the right side of the keypad.

L-shaped Connector
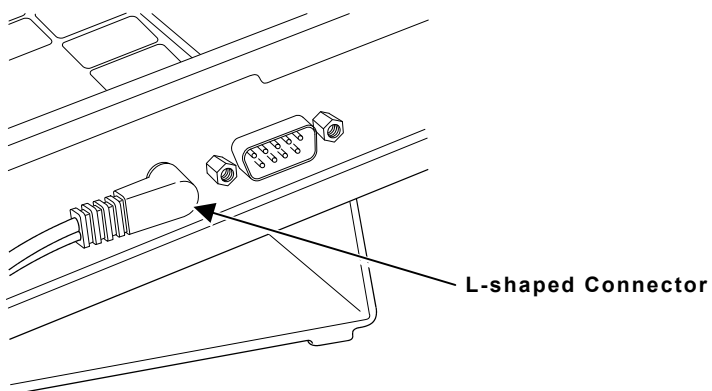
5. Plug the three-pronged end of the AC adapter cord into a grounded electrical outlet.

Connecting the Communication Cable

To connect the serial cable from the printer to the keypad:

1. Turn off the printer and the keypad before connecting the cable.

2. Connect the serial cable to the 9-pin serial port on the back of the printer.
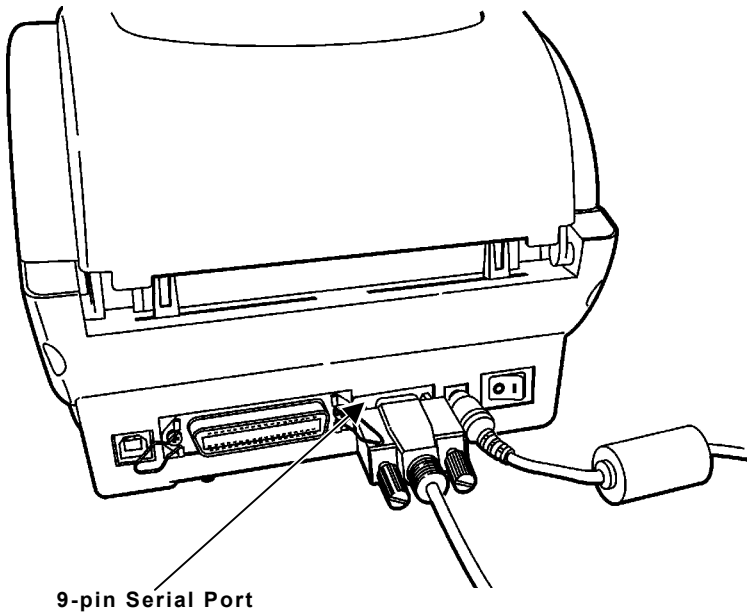
9-pin Serial Port

3. Connect the other end of the serial cable (9-pin) to the serial port on the right-hand side of the keypad.

Serial Port
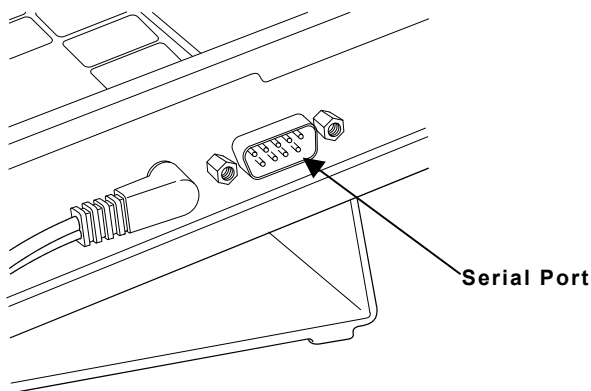
About the Keypad

Use the McDonald's application to label inventory products. The buttons are color-coded so you can easily print the item labels.

- ♦ Yellow – breakfast items
- ♦ Red – grill area items
- ♦ Blue – front counter items
- ♦ Green – prep/salad items
- ♦ Orange – miscellaneous items
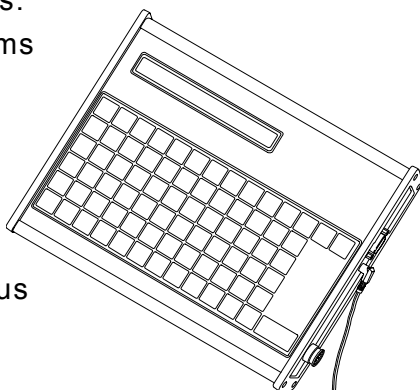
Setting up the McDonald's System

IMPORTANT - Please perform the following steps before using the system.

To set up the system:

1. Press the McDonald's button three times.

> SELECT DATE OR TIME

2. Press the number 3 button.

> SENDING I PACKET COMMAND TO PRINTER, PLEASE WAIT.

3. Press any key to print a label.

Setting the Date and Time

To set the date:

1. Press the McDonald's button three times.

> SELECT DATE OR TIME

2. Press the number 1 button. The display shows the current date setting. If this is correct, press the McDonald's button to return to the main display.

To change the setting, use the numeric buttons:

♦ Press 1 to change the month
♦ Press 2 to change the day
♦ Press 3 to add a year
♦ Press 4 to subtract a year

3. Press the McDonald's button to save the changes and to return to the main display.

To set the time:

1. Press the McDonald's button three times.

SELECT DATE OR TIME

---

2. Press the number 2 button.

The display shows the current time setting.
If this is correct, press the McDonald's button
to return to the main display.
To change the setting, use the numeric
buttons:

♦ press 1 to change the hours
♦ press 2 to change the minutes
♦ press 3 to change AM/PM.

3. Press the McDonald's button to save the changes
and to return to the main display.

Processing the Product

Use the McDonald's application to label any product for freshness. All products are listed on the buttons on the keypad. The numeric buttons on the keypad allow you to enter the quantity of labels to be printed.

To print one label at a time:

1. Press any product button once.

```
CHECKING PRINTER STATUS PLEASE WAIT
```

2. A label prints for the product you selected.

To print multiple labels:

1. Press the numeric buttons to enter a quantity.

```
QTY = X SELECT PRODUCT
```

X represents the quantity
you entered.

2. Press a product button.

```
CHECKING PRINTER STATUS PLEASE WAIT
```

The labels print for the product you selected.

Printing a Use First Label

Apply a "Use First" label to any product on the shelf that needs to be used first.

1. Press the Use First button on the keypad (bottom right).

CHECKING PRINTER STATUS PLEASE WAIT

2. A label with the words "Use First" prints.

Using the Stop Printing Function

If you press the wrong number of labels to be printed, or the wrong product button:

1. Press the Stop Printing button on the keypad (upper right) to cancel printing.

2. Press the **FEED** button on the printer to clear the stopped label.

Note: You must be at the main display for this function to work.

Future Upgrades

Updates will be provided by Supervisors.

To use the Update Utility, see Chapter 5, "Using the Update Utility," for more information.

CARE AND MAINTENANCE

3

This chapter tells you how to

♦ clear label jams

♦ clean the printhead.

Clearing Label Jams

When you are printing and a jam occurs, the indicator light turns RED.

To clear the jam:

1. Turn off the printer. Press the power switch on the back of the printer to the off position (O).

2. Press the cover release levers towards the front of the printer to release the cover.

3. Lift open the cover.

4. If necessary, remove any previously loaded labels. Lift up the supply holder and remove one of the supply holder guides.

5. Slide the labels off the supply holder.

6. Remove the jammed labels.

Caution: **Do not** use sharp or pointed objects to remove labels, or damage to the printhead may occur.

7. Reload the labels. See "Loading Labels" in Chapter 1 for more information.

8. Close the cover until it locks in place.

9. Press the **FEED** button. The indicator light should be GREEN.

Cleaning the Printhead

Remember to clean the printhead every time you load a new label roll into the printer.

Caution: You must turn off the printer's power before cleaning the printhead. To clean the printhead while printing, you may lose your data when you turn off the printer.

1. Turn off the printer. Press the power switch on the back of the printer to the OFF (O) position.

2. Press the cover release levers towards the front of the printer to release the cover.

3. Lift open the cover.

4. Moisten a cotton swab with isopropyl alcohol.

5. Rub the cotton swab across the printhead to remove any build-up.

6. Allow the printhead to dry for one minute before you close the cover and resume printing.
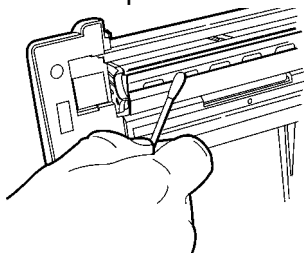
Cleaning the Platen Roller and Printer

Moisten a cotton swab with isopropyl alcohol and run the cotton swab across the platen roller. Turn the platen roller with your finger and make sure it is clean all the way around.
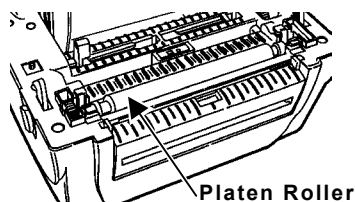
Platen Roller

Note: **Do not** remove the platen roller.

Slightly dampen a cloth with water and wipe the printer's exterior surfaces clean. Use a dry, soft-bristled brush to clean paper dust out of the printer's interior.

TROUBLESHOOTING

4

This section lists some common problems and their solutions.

Problem	Action
Indicator light is off when the printer is turned on.	Check the power connections from the power supply to the printer and wall outlet. See "Connecting the Printer's Power Supply" in Chapter 1 for more information.
Indicator light is GREEN, but the printer will not print.	Check the cable connections from the keypad to the printer. See "Connecting the Communication Cable" in Chapter 2 for more information.
	Make sure the labels are loaded correctly and that they are the Paxar/Monarch labels recommended for this application. See "Loading Labels" in Chapter 1 for more information.
	Clean the printhead. See "Cleaning the Printhead" in Chapter 3 for more information.
	Make sure the cover is closed.
Indicator light is RED.	Out of labels or the cover is open. Load labels. See "Loading Labels" in Chapter 1 for more information. Make sure the cover is closed until it latches, then press the **FEED** button.

Problem	Action
Printing stops and indicator light turns RED. Or, the printer does not advance from one label to the next correctly.	Calibrate the supply. **1.** Turn off the printer. **2.** Load labels. See "Loading Labels" in Chapter 1 for more information. **3.** Press and hold the **FEED** button while turning on the printer. **4.** Release the **FEED** button after the indicator light starts flashing ORANGE. The printer calibrates the die cut sensor, measures the label length, and prints the test labels. **5.** To resume normal printing, turn off the printer, wait two seconds, then turn it back on.
	Load different labels. See "Loading Labels" in Chapter 1 for more information.
	Clear a label jam. See "Clearing Label Jams" in Chapter 3 for more information.
	Make sure the die cut sensor is in the correct position (was not accidentally moved while loading supplies). See "Checking the Die Cut Sensor," in Chapter 1 for more information.

Problem	Action
Label exits partially out of the printer or skips a label.	A label may be caught in the printer. See "Clearing Label Jams" in Chapter 3 for more information.
	Make sure the labels are loaded correctly and that they are the Paxar/Monarch labels recommended for this application. See "Loading Labels" in Chapter 1 for more information.
Printing is faded or poor quality.	Make sure the labels are loaded correctly and that they are the Paxar/Monarch labels recommended for this application. See "Loading Labels" in Chapter 1 for more information.
	Make sure the cover is closed completely.
	Clean the printhead. See "Cleaning the Printhead" in Chapter 3 for more information.
	Adjust the print speed/darkness. See your System Administrator.

Problem	Action
Test label does not print.	Make sure the supply is loaded correctly.
	Make sure the die cut sensor is in the correct position (was not accidentally moved while loading supplies). See "Checking the Die Cut Sensor," in Chapter 1 for more information.
The keypad displays an error.	To clear an error displayed on the keypad, turn off the printer's power switch, wait two seconds, then turn on the printer.

USING THE UPDATE UTILITY

5

The McDonald's Update Utility allows you to

♦ edit the keypad's overlay

♦ change a key's description

♦ print the new overlay

♦ send the updated data to the keypad.

Note: The Update Utility is only for Supervisors or System Administrators.

Before You Begin

Install the Update Utility on a computer with Microsoft® Windows® 98 or greater. The computer should also have Microsoft® Office® 2000 (or greater installed), which includes Access database software.

1. Install the Update Utility by inserting the Update Utility CD into the CD-ROM drive on your computer. Follow the instructions on the screen to complete the installation.

2. Start the Update Utility. The main screen appears.
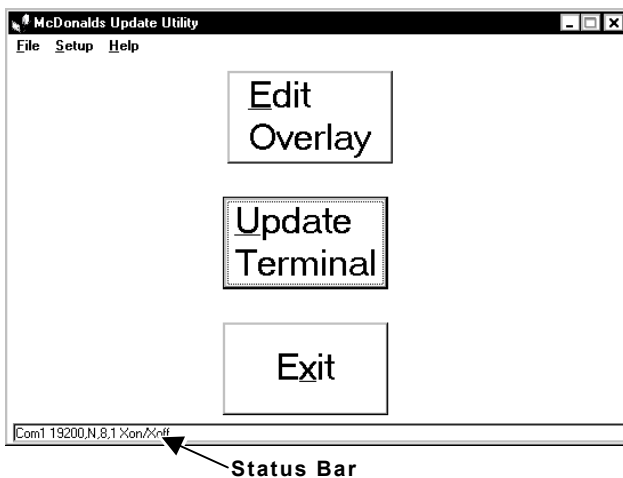
Status Bar

At the bottom left-hand corner, there is a status bar, which displays the utility's current status.

3. Decide what you want to do next:

♦ To edit the overlay (change a key's color or description), see "Editing the Overlay," for more information.

♦ To update the keypad's software/application, see "Updating the Keypad," for more information.

Editing the Overlay

You can change the way the overlay appears (a key's color or text description).

1.   From the main screen, click **Edit Overlay**.
     The Overlay Edit screen appears.
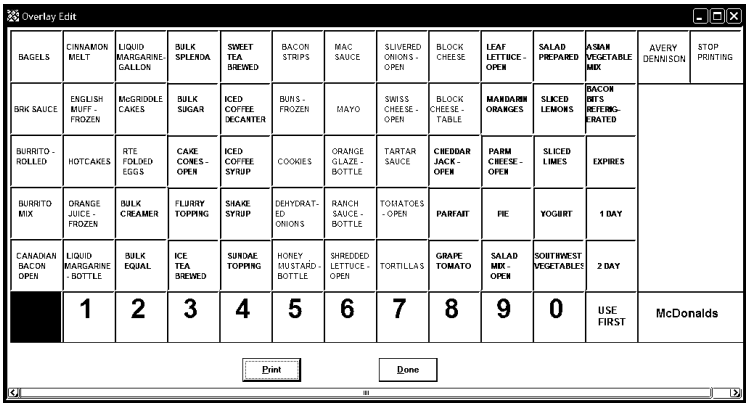
2.   To change a key's text, click the key to change.
     The Edit Overlay Key Data screen appears.
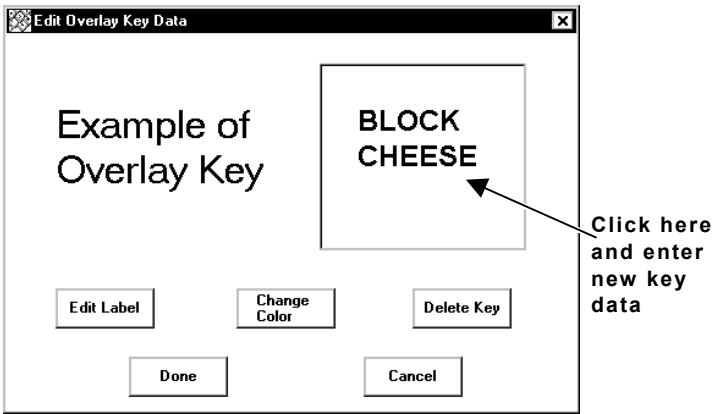
3.   Click in the box and enter the new key data.

4. Click **Edit Label** to change the label's wording, offset time, and choose to print the time on the label. The Edit Label Data screen appears.

Edit Label Data	
Enter English Text Line 1	AMERICAN
Enter English Text Line 2	CHEESE
Enter Spanish Text Line 1	QUESO
Enter Spanish Text Line 2	AMERICANO

Enter Offset Time [24] Hrs. [ ] Min. ☑ Print Time on Label

Example of Label

Done / Cancel / Delete Key

AMERICAN
CHEESE
QUESO
AMERICANO
MUST USE BY:
4:46 PM
4/14/2005

Current time & date

4:46 PM
4/13/2005

5. Change any necessary text for the label or offset time.

6. Decide if you want to print the time on the label. If so, make sure the box is checked next to **Print Time on Label**. If not, make sure the box is *not* checked next to **Print Time on Label**.
A sample label displays while you make changes.

7. Click **Done** when finished editing the label. You return to the previous screen (Edit Overlay Key Data). Or, click **Cancel** to cancel these changes and return to the previous screen (Edit Overlay Key Data).

8. Click **Done** when finished editing the label. You return to the previous screen (Overlay Edit).

9. Click **Done** to return to the main screen.

Whenever you return to the main screen, you are prompted:

Overlay Edit Complete ✕

ⓘ Connect the serial cable from the PC to the keypad terminal.

Click the Update button to download the updated label data to the keypad.

OK
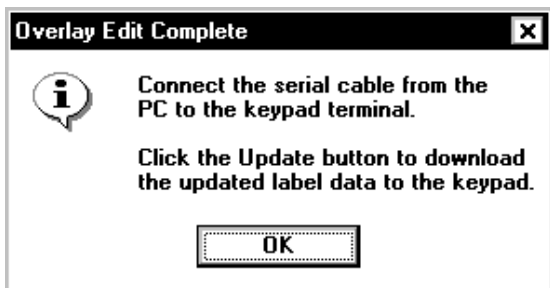
10. Click **OK** to continue.

11. If you made changes:

♦ print the new overlay, see "Printing the Overlay," for more information.

♦ update the keypad's software/application, see "Updating the Keypad," for more information.

Changing a Key's Color

1. From the main screen, click **Edit Overlay**.
   The Overlay Edit screen appears.

2. Click the key to change. The Edit Overlay Key Data screen appears.

3. Click **Change Color**. The Color screen appears.

4. Pick the color you want for the selected key.
   If you want to define a custom color, click **Define Custom Colors>>**. See "Defining Custom Colors," for more information.

5. Click **OK** when finished picking a color for the selected key. You return to the previous screen (Edit Overlay Key Data). Or click **Cancel** to cancel these changes and return to the previous screen (Edit Overlay Key Data).

6. Click **Done** when finished editing the label.
   You return to the previous screen (Overlay Edit).

7. Click **Done** to return to the main screen.
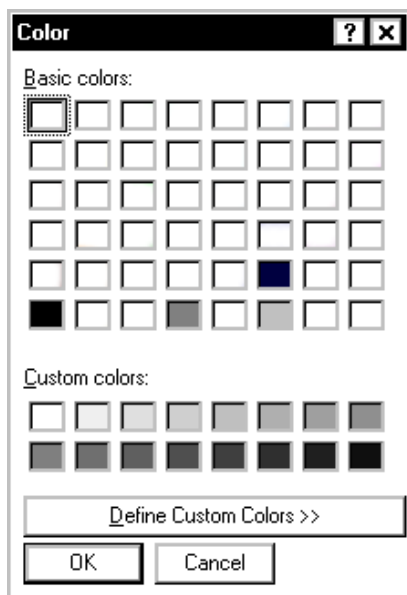
Whenever you return to the main screen, you are prompted:

```
┌──────────────────────────────────────────┐
│ Overlay Edit Complete                  ✕ │
├──────────────────────────────────────────┤
│                                           │
│   ⓘ     Connect the serial cable from the │
│          PC to the keypad terminal.       │
│                                           │
│          Click the Update button to       │
│          download the updated label data  │
│          to the keypad.                   │
│                                           │
│          ┌─────────────────┐              │
│          │      OK         │              │
│          └─────────────────┘              │
└──────────────────────────────────────────┘
```

8. Click **OK** to continue.

9. If you made changes:

♦ print the new overlay, see "Printing the Overlay," for more information.

♦ update the keypad's software/application, see "Updating the Keypad," for more information.
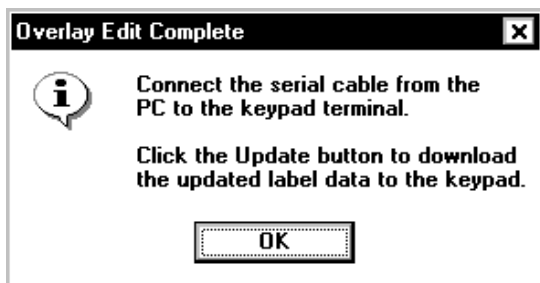
Defining Custom Colors

1. From the main screen, click **Edit Overlay**. The Overlay Edit screen appears.

2. Click the key to change. The Edit Overlay Key Data screen appears.

3. Click **Change Color**. The Color screen appears.

4. From the Color screen, click **Define Custom Colors**. The Custom Color screen appears.

5. Enter values for Hue, Sat, Lum, Red, Green, and Blue as necessary. The color changes based on each value you change.

6. Click **Add to Custom Colors**.

7. Click the color you just added to the custom colors palette.

8. Click **OK** when finished defining a custom color for the selected key. You return to the previous screen (Edit Overlay Key Data). Or click **Cancel** to cancel these changes and return to the previous screen (Edit Overlay Key Data).

9. Click **Done** when finished editing the label. You return to the previous screen (Overlay Edit).

10. Click **Done** to return to the main screen.
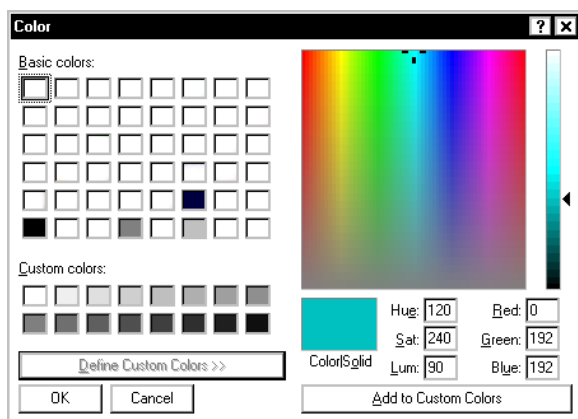
Whenever you return to the Main screen, you are prompted:

```
┌────────────────────────────────────────────┐
│ Overlay Edit Complete                    ☒ │
├────────────────────────────────────────────┤
│   ┌─┐    Connect the serial cable from the  │
│   │i│    PC to the keypad terminal.         │
│   └─┘                                       │
│          Click the Update button to download│
│          the updated label data to the keypad. │
│                                             │
│           ┌──────────────────┐              │
│           │       OK         │              │
│           └──────────────────┘              │
└────────────────────────────────────────────┘
```

11. Click **OK** to continue.

12. If you made changes:

♦ print the new overlay, see "Printing the Overlay," for more information.

♦ update the keypad's software/application, see "Updating the Keypad," for more information.

Deleting a Key

You can delete a key from either the Edit Overlay Key Data or Edit Label Data screen. When you delete a key

♦ the key's information is removed from the database.

♦ the key appears as a black box on the overlay.

Note: Check with your System Administrator before removing any key from the database.
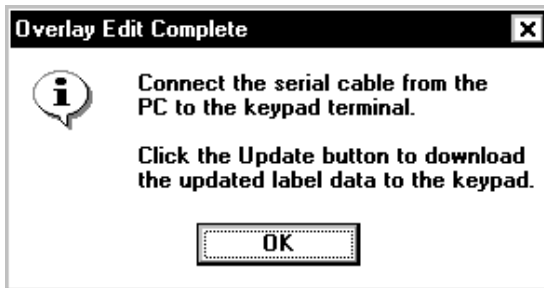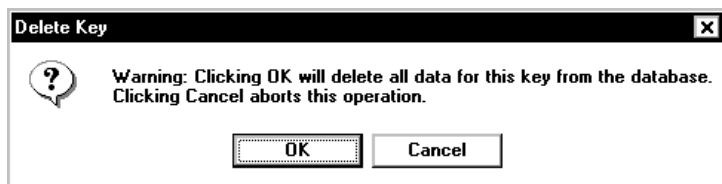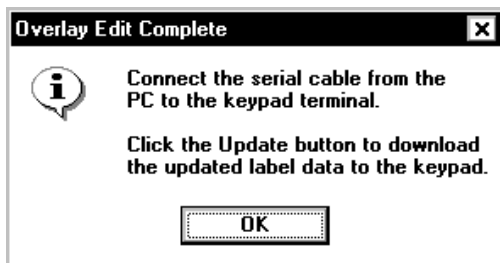
1. From the main screen, click **Edit Overlay**. The Overlay Edit screen appears.

2. Click the key to delete. The Edit Overlay Key Data screen appears. When you click **Delete Key**, you see

```
Delete Key                                            ☒
  (?)   Warning: Clicking OK will delete all data for this key from the database.
        Clicking Cancel aborts this operation.

              ┌─────────┐      ┌─────────┐
              │   OK    │      │ Cancel  │
              └─────────┘      └─────────┘
```

3. Click **OK** to remove ALL data for this key from the database and display a black box in place of this key on the overlay.

4. Click **Cancel** to return to the previous screen and keep the key in the database.

5. Click **Done** to return to the previous screen.

6. Click **Done** to return to the main screen.
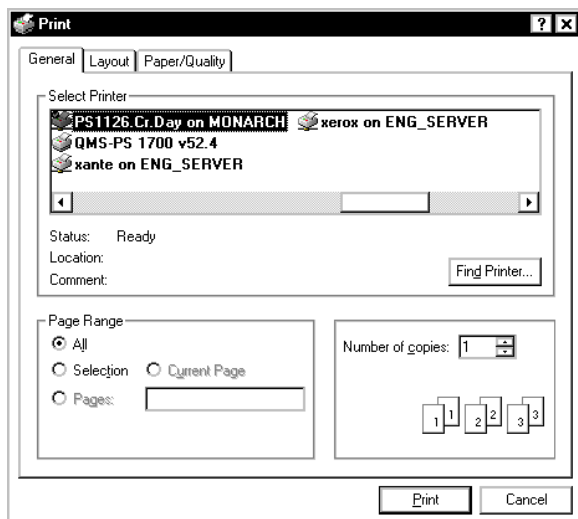
Whenever you return to the main screen, you are prompted:

```
Overlay Edit Complete                       ☒

   (i)      Connect the serial cable from the
            PC to the keypad terminal.

            Click the Update button to download
            the updated label data to the keypad.

              ┌─────────────┐
              │     OK      │
              └─────────────┘
```

7. Click **OK** to continue.

8. If you made changes:

♦ print the new overlay, see "Printing the Overlay," for more information.

♦ update the keypad's software/application, see "Updating the Keypad," for more information.
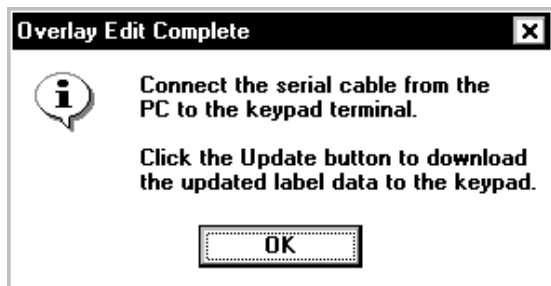
Printing the Overlay

If you make any changes to the overlay, print it and insert it into the keypad.

1. From the main screen, click **Edit Overlay**. The Overlay Edit screen appears.

2. Click **Print**. The Print screen appears. Your Print screen may appear differently, based on your operating system and printer.

3. Select the printer.

4. Make any changes to the number of copies, layout, and paper/quality if necessary.

5. Click **Print** to send the overlay to the selected printer.

6. Click **Done** to return to the main screen.

Whenever you return to the main screen, you are
prompted:

Overlay Edit Complete

Connect the serial cable from the
PC to the keypad terminal.

Click the Update button to download
the updated label data to the keypad.

OK

7. Click **OK** to continue.

Updating the Keypad

After the changes are made to the key and label data,
send the updated data to the keypad/terminal, so the
changes appear on any future labels printed.

Note: Make sure the printer is connected to the
computer.

Make sure the computer's serial communication
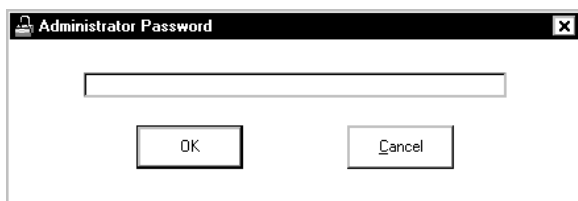values match those at the keypad.
See "Communication Settings," for more information.
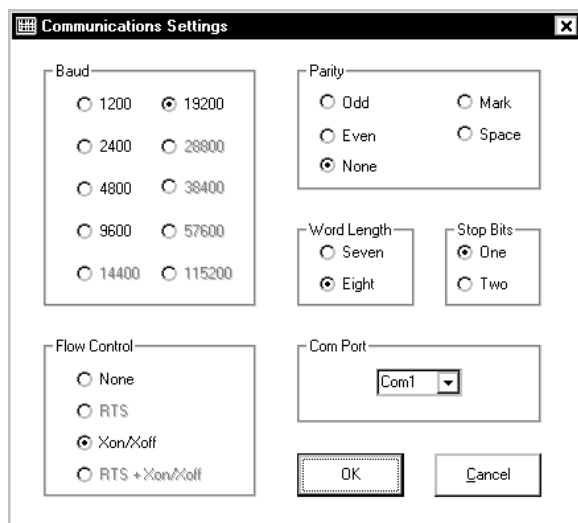
Communication Settings

The Update Utility scans your computer for available communication ports and adds them to the Com Port list box.

To display the communication settings:

1. From the main screen, click **S̲etup**, **Com Port**. You see

2. Enter the password: **5675** and click **OK**. The Communications Settings screen appears.
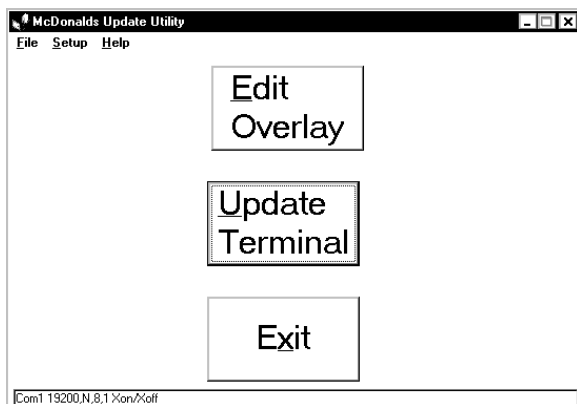

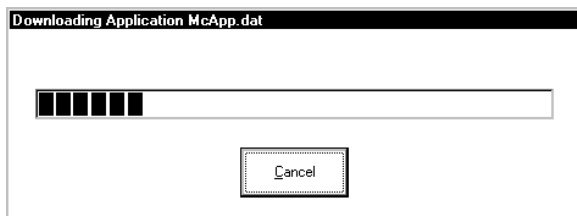   The default settings match the settings of the keypad.

3. Make any changes and click **OK** when finished. You return to the main screen.

To update the keypad/terminal:

1. Connect the serial cable from the computer to the keypad/terminal.

McDonalds Update Utility
File   Setup   Help

Edit
Overlay

Update
Terminal

Exit

Com1 19200,N,8,1 Xon/Xoff

2. From the main screen, click **Update Terminal**.

Downloading Application McApp.dat

Cancel

The Update Utility begins sending the application and data files to the keypad. **This process may take several minutes. Do not** click **Cancel** while updating the keypad/terminal.

3. When finished, you see "Update Complete. Please unplug terminal power and connect printer cable." Click **OK**.

4. Unplug the keypad's serial cable to the computer and reconnect it to the printer. Unplug the terminal's power cable. Wait several seconds and then reconnect the power cable to the keypad. The keypad is now ready to use.

5. Click **Exit** to close the Update Utility.

SPECIFICATIONS

A

This appendix includes information about printer specifications.

Printer Specifications

Height:	6.6" (168 mm)
Width:	8.3" (211 mm)
Depth:	9.4" (239 mm)
Weight:	4.1 lbs. (1.9 kg) without power supply
Shipping Weight:	9.0 lb. (4.1 kg)
Power:	U.S. - 120 VAC ± 10%, 60Hz International - 220 VAC ± 10%, 50Hz
Operating Limits:	Operating Thermal Direct 40° to 105° F (4° to 40° C) Storage: 40° to 140° F (4° to 60° C)
Printhead:	4.09" (104 mm) 203 dpi (8.0 dots per mm)
Printing Method:	Thermal Direct

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